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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/564,729	10/16/2006	Peggy Studer	Q92181	9662
23373 7590 11/17/2008 SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037				
EXAMINER PEZZUTO, HELEN LEE				
ART UNIT		PAPER NUMBER		
1796				
MAIL DATE		DELIVERY MODE		
11/17/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/564,729

**Applicant(s)**

STUDER ET AL.

**Examiner**

/HELEN L. PEZZUTO/

**Art Unit**

1796

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 11 September 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 10-12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 13-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-19 are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SI-108)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_\_

## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's election with traverse of Group I, claims 1-9, and newly added claims 13-19 in the reply filed on 9/11/08 is acknowledged. The traversal is on the ground(s) that all the claims contain the composition as described in claim 1. This is not found persuasive because the invention set forth in claims 10-11 are directed to a composite. The search of the composition as described in claim 1 does not require the search of the layered structure set forth in claims 10-11. In the event that the composition claims are found allowable, the method of using an allowable composition can be rejoined.

The requirement is still deemed proper and is therefore made FINAL.

1. Claims 10-12 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected inventions, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 9/11/08.

### ***Response to Amendment***

Applicant's amendment to claims 4, 12, and the addition of claims 13-19 filed in the response on 9/11/08 is acknowledged. Currently, claims 1-9, and 13-19 are under consideration.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 2 and 4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Claim 2 recites the limitation "photopolymerizable group" according to claim 1. There is insufficient antecedent basis for this limitation in the claim 1.
5. In claim 4, what is the definition of X:<sub>2</sub>?

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-9, and 13-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Herr et al. (US-427 or US-087) or Gibbons et al. (US-404).

US 6,107,427 to Herr et al. discloses a crosslinkable, photoactive polymer composition comprising units of compound I. Prior art further discloses copolymer composition containing comonomer units which may be further structures or formula I (col. 5, line 52 to col. 6, line 9; col. 9, lines 21-39; col. 12, line 65 to col. 14, line 4). Specifically, rings B and C within structure formula I can have naphthalene moieties which are defined within the scope of the instant sensitizer-containing monomer (b) (col. 3, lines 54-58; col. 4, lines 2-6; cols. 35-36, Example 8). US-427 further exemplifies photoactive monomers within the scope of the instant photochemically isomerizable or dimerizable monomer (a) (see working examples). Other suitable ethylenically unsaturated comonomers within the scope of the instant monomer (c) are also suggested (col. 5, line 52 to col. 6, line 9).

US 6,201,087 to Herr et al. discloses and exemplifies photoreactive polymers derived from coumarin or quinolinone derivatives defined within the scope of the instant (b) monomer (col. 4, lines 22-65). Prior art further discloses and exemplifies copolymer containing repeating units which fall within the scope of the instant (a) and (b) monomers (cols. 25-26, Example 8). Furthermore, the coumarin monomers are taught to be “photochemically dimerizable” which are also within the scope of the instant (a) monomer. Other unsaturated monomers taught within the scope of the instant monomer (c) are also disclosed.

Similarly, US 6,919,404 to Gibbons discloses hybrid polymer for liquid crystal alignment layers comprising a polyimide component and at least one addition monomers. Prior art polyimides can be derived from functional dianhydries including naphthalene group-containing dianhydries (col. 6, lines 53-56), which fall within the scope of the instant monomer (b). Furthermore, US-404 teaches using addition monomer having coumarin structures, within the definition of the instant monomer (b) (col. 8, line 53 to col. 9, line 20). Other addition monomers taught include those of the instant monomer (a) (cols. 9-12, Tables 3, 4). Other functional addition monomers are further suggested.

Accordingly, it would have been obvious to one having ordinary skill in the art to select the recited monomers (a), (b) , and (c) to form the claimed copolymer composition as suggested in the prior art references, motivated by the reasonable expectation of success in producing photoactive materials suitable in the manufacturing of optical alignment layers.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helen L. Pezzuto whose telephone number is (571)272-1108. The examiner can normally be reached on 8:00AM to 4:30PM, Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wu David can be reached on (571)272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/HELEN L PEZZUTO/  
Primary Examiner  
Art Unit 1796

hlp